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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10, SEATTLE, WASHINGTON

IN THE MATTER OF:

ELEMENTAL PHOSPHORUS SLAG

The Monsanto Company and

FMC Corporation,

Respondents

Proceeding Under Section 7003(a)  
of the Resource Conservation and  
Recovery Act, as amended,  
42 U.S.C § 6973 (a)

Administrative Order  
On Consent  
EPA Docket No.  
10-96-0045-RCRA

I. INTRODUCTION

1.1. This Administrative Order on Consent ("Consent Order") is entered into voluntarily between The Monsanto Company, FMC Corporation (individually "Company" and collectively the "Companies") and the United States Environmental Protection Agency ("EPA"). This Consent Order documents the commitment of EPA and the Companies to work together to conduct further studies and implement action as provided in this Consent Order regarding the release of radionuclides associated with elemental phosphorus slag in Southeast Idaho. This Consent Order supersedes the previous agreement in this matter (Administrative Order on

1 Consent No. 1092-11-04-7003) (hereinafter, "Previous Consent  
2 Order"). By signing this Consent Order, the Companies consent to  
3 issuance of this Consent Order.  
4

## 5 **II. JURISDICTION**

6 2.1. This Consent Order is issued under the authority  
7 vested in the Administrator of EPA by Section 7003(a) of the  
8 Resource Conservation and Recovery Act, as amended, ("RCRA"), 42  
9 U.S.C. § 6973(a). This authority was delegated on March 20, 1985  
10 from the EPA Administrator to the Regional Administrators by EPA  
11 Delegation No. 8-22-A and C; and further delegated to the EPA  
12 Region 10 Director and appropriate Unit Manager, Environmental  
13 Cleanup Office, by Regional Redelegation.

14 2.2. Each Company agrees to undertake all actions required  
15 of it by this Consent Order. In any action by EPA or the United  
16 States to enforce the terms of this Consent Order, the Companies  
17 agree not to contest the authority or jurisdiction of EPA to  
18 issue or enforce this Consent Order or its terms.  
19

## 20 **III. PARTIES BOUND**

21 3.1. This Consent Order shall apply to and be binding upon  
22 EPA and upon the Companies, their successors and assigns. No  
23 change in the ownership or corporate or other legal status of the  
24 Companies shall alter their responsibilities under this Consent  
25 Order.

26 3.2. Each Company shall provide a copy of this Consent  
27 Order to all contractors, subcontractors, laboratories, and  
28 ELEMENTAL PHOSPHORUS SLAG ADMINISTRATIVE ORDER ON CONSENT - 2

consultants retained to conduct any work under this Consent Order, and to any subsequent owners of or successors to 25% or more of the outstanding shares of the Company or 10% of the total assets of the Company. The Companies shall condition any contracts to conduct any work under this Consent Order upon satisfactory compliance with this Consent Order. Notwithstanding the terms of any contract, the Companies are responsible for compliance with this Consent Order and for ensuring that their subsidiaries, employees, agents, contractors, consultants, subcontractors, and attorneys comply with this Consent Order.

#### IV. PURPOSE AND OBJECTIVES

4.1. In entering into this Consent Order, the general mutual objective of EPA and the Companies is to protect the public health or welfare or the environment with regard to the release of radionuclides in the environs within Southeast Idaho. Specifically, the mutual purposes and objectives of the parties are:

(A) To use the methods developed under the Previous Consent Order to study the risk, if any, to exposed individuals from radionuclide releases in Southeast Idaho associated with elemental phosphorus slag, including determining as precisely as possible the level of such releases, and individual radiological exposures to slag-containing materials; and

(B) To provide the parameters under which the Companies will take action to reduce radiological exposures associated with the use of elemental phosphorus slag in southeast

1 Idaho in accordance with the Graded Decision Guidelines ("GDGs")  
2 that were developed as described in the Previous Consent Order.  
3

#### 4 V. DISCLAIMER

5 5.1. By signing this Consent Order and taking actions under  
6 this Consent Order, the Companies do not necessarily agree with  
7 EPA's Findings of Fact, Conclusions of Law or Determinations.  
8 Further, acts pursuant to this Consent Order by the Companies  
9 shall not be considered an admission of liability for any purpose  
10 in any proceedings, and are not admissible as evidence against  
11 the Companies in any judicial or administrative proceeding other  
12 than a proceeding by the United States, including EPA, to enforce  
13 this Consent Order. The Companies agree not to contest the  
14 validity or terms of this consent Order in any action brought by  
15 EPA to enforce this Consent Order.  
16

#### 17 VI. EPA FINDINGS OF FACT

18 6.1. Based on information available to EPA and for the  
19 purposes of this Consent Order, EPA makes the following Findings  
20 of Fact:

21 A. The Monsanto Company and FMC Corporation operate  
22 elemental phosphorus manufacturing facilities respectively in  
23 Soda Springs, Idaho and Pocatello, Idaho. Elemental phosphorus  
24 slag ("slag") is a byproduct of the operation of those  
25 facilities.

26 B. The Monsanto Company is a Delaware Corporation  
27 authorized to do business in the state of Idaho. FMC Corporation  
28 ELEMENTAL PHOSPHORUS SLAG ADMINISTRATIVE ORDER ON CONSENT - 4

1 is a Delaware Corporation authorized to do business in the state  
2 of Idaho. Mailing addresses for the purposes of this Order are:

3 Bruce Pallante, Plant Manager  
4 Monsanto Chemical Company  
5 Soda Springs Plant  
6 Post Office Box 816  
7 Soda Springs, Idaho 83276

8 Paul R. Yochum, Plant Manager  
9 FMC Corporation  
10 Post Office Box 4111  
11 Pocatello, Idaho 83202

12 C. The slag has been used in residential  
13 construction; as paving aggregate for highways, streets and  
14 sidewalks, including most of the streets in the cities of Soda  
15 Springs and Pocatello; airport tarmacs; in roofing materials;  
16 construction fill; and other uses in Southeast Idaho.

17 D. The State of Idaho prohibited the use of slag for  
18 residential construction in 1976. Immediately thereafter, the  
19 Companies voluntarily suspended the use of slag in the  
20 construction of all inhabited buildings. Slag continued to be  
21 sold and used for other purposes such as road construction.

22 E. In 1977 and 1978, the Idaho Department of Health  
23 and Welfare ("IDHW") conducted a gamma survey ("Peterson Survey")  
24 in areas of southeast Idaho, primarily Soda Springs and  
25 Pocatello, where slag construction was prevalent. Gamma readings  
26 associated with many residential properties in Soda Springs  
27 exceeded 20 uR/hr, a level which may pose a public health concern  
28 (40 C.F.R. § 192.12(b)(2)).

29 F. EPA's Idaho Radionuclide Study ("Idaho Study")  
30 issued in April 1990, estimated radiation doses to populations in



1 Soda Springs and Pocatello from a variety of area sources. The  
2 study concluded that the "primary source of gamma radiation in  
3 both Pocatello and Soda Springs is radioactive slag, a residue  
4 from phosphate industry processes." The Idaho Study further  
5 concludes that "exposure to outdoor sources is the greatest  
6 contributor to the population dose in Pocatello, due to slag used  
7 in street paving, while that to the residents of Soda Springs is  
8 mostly due to indoor (home) exposure, caused by slag in home  
9 foundations." EPA determined on the basis of the Idaho Study  
10 that there was a need to conduct additional sampling and  
11 monitoring to determine individual radiation exposures associated  
12 with past uses of slag in Southeast Idaho.

13 G. Following the release of the Idaho Study, the  
14 Companies voluntarily suspended the sale of slag for all  
15 construction uses pending the resolution of issues regarding the  
16 past and future use of slag.

17 H. The Shoshone-Bannock Tribes passed a resolution in  
18 1990 prohibiting the use of slag on reservation lands.

19 I. The EPA Science Advisory Board ("SAB") issued a  
20 letter report on January 21, 1992, to the EPA Administrator  
21 regarding the Idaho Study. The report recognized that "gamma-  
22 radiation exposure levels from elemental phosphorus slag can  
23 reach 60-65 uR/hr in some areas, which is 4-5 times the  
24 background level prevalent in Southeast Idaho." Further, the  
25 report recognized that "elevated gamma radiation levels occur in  
26 Pocatello and Soda Springs such that some persons could receive  
27

1 doses above the widely accepted population exposure guide of  
2 100 millirems per year in excess of natural background".

3 J. The SAB recommended that EPA: (i) "work with  
4 local and state officials, the public and industry to make  
5 measurements for individuals based on their particular exposure  
6 conditions;" (ii) "establish a set of graded decision guidelines  
7 based on technical and economic factors for both short-term and  
8 long-term exposure of the public due to past uses of slag;" and  
9 (iii) "make risk assessments for those persons exposed within the  
10 decision guidelines and provide them with information for making  
11 informed decisions."

12 K. A draft 1992 EPA report on diffuse Naturally  
13 Occurring Radioactive Materials (NORM) waste estimated the 70-  
14 year lifetime risk of acquiring a fatal cancer from one year of  
15 exposure to slag in building materials (average estimated  
16 concentration of 33 picoCuries/gram for Radium-226), exclusive of  
17 the radon inhalation pathway, to be approximately four (4) in  
18 1000 for average persons in the critical population group.

19 L. Notice of this Consent Order has been given to the  
20 State of Idaho and the Shoshone-Bannock Tribes.

21 M. Based on (i) information provided by the affected  
22 communities and by the Technical Work Group established under  
23 Section 10 of the Previous Consent Order, (ii) the work plans and  
24 reports that the Companies developed pursuant to the Previous  
25 Consent Order; (iii) pertinent radiation protection principles  
26 and applicable or relevant and appropriate laws and promulgated  
27 regulations, including the BEIR (Biological Effects of Ionizing

1 Radiation) V Report and ICRP (International Committee on  
2 Radiation Protection) 60; and (iv) the SAB recommendations  
3 referenced in Sections 6.1.I. and J. of this Consent Order; EPA  
4 has finalized Graded Decision Guidelines ("GDGs") (Attachment  
5 "1") that recommend potential actions for ranges of radiological  
6 exposures from slag in Southeast Idaho.

7 N. The Companies have completed the methods  
8 development activities required under Section IX of the Previous  
9 Consent Order. These activities involved the development of  
10 techniques to measure individual radiological exposures from  
11 elemental phosphorus slag, and included preparation and submittal  
12 of a Methods Development Work Plan and submittal of a Methods  
13 Development Study Final Report. EPA has reviewed and approved  
14 both of these documents. The Companies also have prepared, and  
15 EPA has approved, an Exposure Study Work Plan (Attachment "2")  
16 that sets forth protocols and schedules for evaluating  
17 radiological exposures in Southeast Idaho communities where  
18 elemental phosphorus slag has been used. Completion of these  
19 methods development studies and work plans provides the basis for  
20 accurately assessing individual exposures and identifying  
21 appropriate action pursuant to the GDGs.

22 O. The Companies have prepared and submitted to EPA a  
23 Graded Decision Guidelines Implementation Plan ("GDG  
24 Implementation Plan") (Attachment "3") that describes the  
25 procedures the Companies will follow to carry out the options  
26 specified in the GDGs. EPA has reviewed and approved this GDG  
27 Implementation Plan.



1 VII. EPA CONCLUSION OF LAW

2 7.1. The radionuclide-bearing slag generated by the  
3 Companies' elemental phosphorus manufacturing plants is a "solid  
4 waste" as defined in Section 1004(27) of RCRA, 42 U.S.C.  
5 § 6903(27).

6 VIII. DETERMINATION

7 8.1. EPA has determined that the handling or use of slag as  
8 a construction material in buildings, roads and other  
9 construction in Southeast Idaho may present an imminent and  
10 substantial endangerment to public health or the environment.  
11 EPA also has determined that the actions specified in this  
12 Consent Order constitute reasonable and appropriate measures to  
13 reduce radiological exposures from slag.

14 IX. WORK TO BE PERFORMED

15 9.1. The activities conducted under this Consent Order are  
16 subject to EPA approval and shall be conducted in accordance with  
17 applicable or relevant and appropriate laws, regulations, EPA  
18 guidance, policies and procedures.

19 9.2. Within thirty (30) days after the effective date of  
20 this Consent Order, each Company shall initiate the activities  
21 specified in the Exposure Study Work Plan (these activities are  
22 referred to herein as the "Exposure Study") and the GDG  
23 Implementation Plan. These activities will include (i) seeking  
24 the voluntary consent of property owners in Soda Springs,  
25 Pocatello and Fort Hall to participate in the Exposure Study,  
26 (ii) offering to carry out the options specified in the GDGs with  
27 respect to properties owned by study participants as described in  
28 ELEMENTAL PHOSPHORUS SLAG ADMINISTRATIVE ORDER ON CONSENT - 9

1 Section 9.5 of this Consent Order, and (iii) locate slag in the  
2 communities. Each Company shall prepare reports regarding the  
3 results of these studies, and submit such reports to EPA and  
4 other entities as appropriate, in accordance with this Consent  
5 Order and the schedules and other relevant requirements set forth  
6 in the Exposure Study Work Plan and the GDG Implementation Plan.

7 9.3. EPA acknowledges that the Companies have entered into  
8 a Memorandum of Agreement ("MOA") (Attachment "4") with the  
9 Southeast Idaho District Health Department ("Health Department")  
10 under which the Health Department will carry out significant  
11 aspects of the Exposure Study and GDG implementation.

12 Notwithstanding this MOA, the Companies shall remain responsible  
13 for carrying out all the actions that are required of them by  
14 this Consent Order.

15 9.4. All Attachments to this Consent Order, including any  
16 schedules, attachments or amendments thereto, are incorporated  
17 into and made an enforceable part of this Consent Order by this  
18 reference.

19 9.5. Each Company shall take action as specified in this  
20 Consent Order with respect to the properties that are evaluated  
21 in the Exposure Study. The Companies shall implement such action  
22 upon the request of the owner(s) and occupier(s), or occupier(s)  
23 alone if such occupier(s) have authority from the owner(s) to  
24 request such action, of affected properties after identifying any  
25 radiological exposures that (i) are within the ranges for which  
26 the GDGs recommend risk reduction measures and (ii) include a  
27 reducible dose from slag as defined in Section IV.6 of the GDGs

1 that is equal to or greater than the threshold established by the  
2 GDGs. The action shall consist of one or more of the risk  
3 reduction options specified in Section V of the GDGs for the  
4 exposure levels found at that location. As stated in Section IV  
5 of the GDG Implementation Plan, the Companies acknowledge that  
6 implementation will require flexibility. The Companies agree to  
7 consider other options in good faith in the event of special,  
8 unanticipated or unusual circumstances or if a property owner or  
9 occupier is dissatisfied with the options that are offered. If  
10 (i) an owner cannot be located or (ii) an owner consents and an  
11 occupier does not consent to performance of the Exposure Study or  
12 implementation of action recommended by the GDGs, the affected  
13 Company shall notify EPA promptly and take reasonable efforts to  
14 locate the property owner or obtain the occupier's consent as  
15 appropriate.

16 9.6. Each Company shall ensure that an inventory of slag is  
17 established and maintained as described in the GDGs and the  
18 Exposure Study Work Plan. Residences will not be included in  
19 this inventory upon the request of property owner(s). Non-  
20 residential premises will be listed in this inventory if they are  
21 found to have exposures above the relevant threshold established  
22 by the GDGs; the owners of such premises shall consent to such  
23 potential listing as a condition of their agreement to have their  
24 premises evaluated during the Exposure Study.

25 9.7. Within six (6) months after the issuance of this  
26 Consent Order, each Company shall prepare an interim report  
27 summarizing the activities it has performed in carrying out the  
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1 study and implementing the GDGs and submit the report to EPA for  
2 review and approval.

3 9.8. As EPA may prescribe, at intervals of not less than  
4 twelve (12) months following submittal of the interim report  
5 referenced in Section 9.6 above, and continuing not later than  
6 the date the work under this Consent Order is completed pursuant  
7 to Section 28.1, each Company shall prepare a summary report  
8 regarding its performance of the Exposure Study and the GDG  
9 Implementation Plan, and submit such report to EPA for its review  
10 and approval.

11 9.9. Monsanto shall be solely responsible for conducting  
12 the Exposure Study, carrying out the GDG Implementation Plan and  
13 making required reports and submittals regarding such activities  
14 with respect to Soda Springs and environs nearest thereto. FMC  
15 similarly shall be solely responsible for conducting the Exposure  
16 Study, carrying out the GDG Implementation Work Plan and making  
17 required reports and submittals regarding such activities with  
18 respect to Pocatello and Fort Hall and environs nearest thereto.

19 9.10. Progress reports shall be submitted by each Company  
20 to EPA on or before the tenth (10th) day of each month following  
21 the month in which this Consent Order is issued. Each Company  
22 shall continue making such reports until the date the work under  
23 this Consent Order is completed pursuant to Section 28.1. Upon  
24 written approval by EPA, these progress reports may be submitted  
25 on a less frequent basis than monthly or the requirement to  
26 submit these progress reports may be terminated at some point  
27 before the completion of work pursuant to Section 28.1.

1 9.11. At EPA's direction, each Company shall fully correct  
2 and modify any deliverable for which it is responsible pursuant  
3 to this Consent Order and incorporate and integrate all  
4 information and comments supplied by EPA in either a subsequent  
5 or resubmitted deliverable within fourteen (14) days after  
6 receipt of EPA comments, or such longer or shorter time as EPA  
7 may specify. At the time the revised deliverable is submitted,  
8 the affected Company shall submit a cover letter describing how  
9 each EPA comment was addressed along with a statement certifying  
10 that no other changes were made to the deliverable. Failure to  
11 fully modify and correct any deliverable in accordance with this  
12 paragraph shall constitute noncompliance with this Consent Order.  
13 In addition, EPA may modify unilaterally any deliverable, and  
14 each Company shall take action in accordance with such modified  
15 deliverable.

16 9.12. Neither failure of EPA to expressly approve or  
17 disapprove a plan, report, deliverable, or any other submission  
18 within a specified time period, nor the absence of EPA comments,  
19 shall be construed as approval by EPA. All approvals by EPA  
20 shall be in writing.

#### 21 X. TECHNICAL WORK GROUP

22 10.1. The implementation of studies and graded decision  
23 guidelines as described in this Consent Order may raise complex  
24 technical and/or socioeconomic issues. EPA and the Companies  
25 established a Technical Work Group ("TWG") in the Previous  
26 Consent Order to assist them in addressing these matters. Upon  
27 EPA request, this TWG will provide assistance regarding the  
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1 design and implementation of the actions to be taken pursuant to  
2 this Consent Order.

### 3 XI. ADDITIONAL WORK

4 11.1. If at any time before the termination of this Consent  
5 Order, either Company identifies a need for additional data or  
6 work, the Company shall submit a memorandum documenting the need  
7 for additional data or work to the EPA Project Coordinator within  
8 seven (7) days after such identification.

9 11.2. If EPA determines that other investigative tasks, in  
10 addition to the tasks defined in this Consent Order or EPA-  
11 approved Work Plans required by Section IX above, are necessary  
12 to accomplish the purpose and objectives of this Consent Order,  
13 EPA will notify one or both Companies as appropriate in writing  
14 of the additional tasks to be performed. Each affected Company  
15 shall either confirm its willingness to perform the additional  
16 tasks in writing to EPA within fourteen (14) days after receipt  
17 of the EPA notice, or invoke the dispute resolution provisions in  
18 Section XIX of this Consent Order. Subject to the resolution of  
19 any dispute, each affected Company shall implement the additional  
20 tasks which EPA determines to be necessary. The additional tasks  
21 shall be completed according to the standards, specifications,  
22 and schedule set forth or approved by EPA. At any point, EPA may  
23 conduct any tasks itself, seek reimbursement of response costs  
24 from each affected Company, and/or seek any other appropriate  
25 relief.

## **XII. QUALITY ASSURANCE**

12.1. Throughout all sample collection, transportation, and analysis activities conducted pursuant to this Consent Order, the Companies shall use procedures for quality assurance ("QA"), quality control ("QC"), and for chain-of-custody in accordance with approved EPA methods. The Companies shall require each laboratory used to perform any work related to this Consent Order to employ approved EPA methods, and to participate in a QA/QC program equivalent to the EPA QA/QC program and to be consistent with the EPA document, QAMS 005/80. The Companies have submitted and EPA has approved a QA/QC plan for the Exposure Study as part of its approval of the Exposure Study Work Plan referenced in Paragraph 9.2 above. All field work and sampling activities conducted by or on behalf of the Companies under the Exposure Study Work Plan shall comply with this QA/QC plan and with any EPA-approved amendments thereto.

## **XIII. AVAILABILITY OF DATA**

13.1. The Companies shall submit quality assured results of all sampling, tests, and other data generated by the Companies pursuant to this Consent Order to EPA and IDHW within seven (7) days after QA/AC review is completed, but in no event later than thirty (30) days after sampling or field testing, in accordance with the EPA-approved work plans. All raw data generated pursuant to this Consent Order shall be made available to EPA or IDHW upon request. The deadlines established in this paragraph

1 may be extended by the EPA Project Coordinator in writing upon  
2 request by either Company.

3 13.2. The information that the Companies will provide to  
4 EPA pursuant to this Consent Order is anticipated to include  
5 information regarding actual and potential radiological exposures  
6 to individuals at specific residences in the study area. Unless  
7 directed otherwise by a court of competent jurisdiction, EPA  
8 shall, in the interests of rights of privacy of such individuals,  
9 withhold such information from public disclosure to the fullest  
10 extent of applicable law.

11 13.3. Quality assured information, including quality  
12 assured data generated pursuant to this Order but excluding the  
13 information described in Paragraph 13.2 above, shall be provided  
14 to the affected communities, including individual homeowners, as  
15 soon as practicable following EPA review. Unless directed  
16 otherwise by a court of competent jurisdiction, EPA and the  
17 Companies shall provide information regarding the radiological  
18 exposures found at specific residences only to (i) the owner(s)  
19 and occupier(s) of such residences, (ii) the Health Department  
20 and (iii) any other persons or entities whom the homeowners may  
21 designate in writing.

#### 22 XIV. ACCESS

23 14.1. The Companies will obtain or use best efforts to  
24 obtain written access agreements from all owners of inhabited  
25 dwellings, or those with a possessory interest in such dwellings,  
26 to be tested, at least twenty (20) days prior to the time access  
27 is needed.

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**XV. CONTRACTORS**

15.1. All work performed under this Consent Order shall be under the direction and supervision of qualified personnel. Not later than fourteen (14) days after the effective date of this Consent Order, and before any work begins, each Company shall notify EPA, in writing, of the names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants, and laboratories, to be used in carrying out such work. The qualifications of the persons undertaking the work for each Company shall be subject to EPA's review for verification that such persons meet appropriate technical background and experience requirements. If EPA notifies a Company in writing that any such person(s) are not adequately qualified, the Company shall replace said person(s), and shall notify EPA of the identity and qualifications of replacement(s) within seven (7) days after the notice. If EPA subsequently finds the replacement(s) to be less than adequately qualified, the affected Company shall have failed to comply with this Consent Order and EPA may conduct all or part of the work, seek reimbursement of costs and/or payment of penalties from such Company, or take any other actions authorized by law. During the course of the work, each Company shall notify EPA in writing seven (7) days in advance of any changes in, or additions to, the personnel used to carry out the work, including their names, titles, and qualifications. EPA shall have the rights set forth in this paragraph to review the qualifications of all new or replacement personnel.

1                   **XVI. DESIGNATED PROJECT COORDINATORS**

2           16.1. Not later than five (5) days after the effective date  
3 of this Consent Order, each Company and EPA shall designate a  
4 Project Coordinator. Each Project Coordinator shall be  
5 responsible for overseeing his/her principal's implementation of  
6 this Consent Order. To the extent possible, all communication  
7 between the Parties (including letters, reports, etc.) concerning  
8 activities related to this Consent Order shall be directed to the  
9 Project Coordinators.

10          16.2. The Project Coordinators for each Company shall be  
11 qualified, competent persons with experience in waste site  
12 investigations, and shall have the skills necessary to direct and  
13 supervise the activities described in this Consent Order. Upon  
14 selection of a Project Coordinator or any replacement thereof,  
15 each Company shall submit written notice of the Project  
16 Coordinator's qualifications to EPA.

17          16.3. The Parties may change their Project Coordinator by  
18 sending written notification to the other Project Coordinators no  
19 later than five (5) days before such change.

20          16.4. The Project Coordinator designated by EPA shall have  
21 the authority described in the National Contingency Plan ("NCP"),  
22 40 C.F.R. Part 300, as amended, for a Remedial Project Manager or  
23 On-Scene Coordinator.

24  
25                   **XVII. DOCUMENTS**

26          17.1. All documents transmitted to EPA, including all  
27 deliverables and correspondence, related to this Consent Order,  
28 ELEMENTAL PHOSPHORUS SLAG ADMINISTRATIVE ORDER ON CONSENT - 18



1 shall be delivered to the EPA Project Coordinator, and to such  
2 other persons as EPA may specify in writing consistent with the  
3 provisions of Sections 13.2 and 13.3 of this Consent Order.

4 17.2. Each Company shall preserve, for a minimum of five  
5 (5) years after EPA approval of the Company's certification of  
6 completion of the matters covered by this Consent Order, all  
7 records and documents in its possession or control, or which come  
8 into the control of its employees, agents, accountants or  
9 contractors which relate to work performed pursuant to this  
10 Consent Order, despite any record destruction policy to the  
11 contrary. Each Company shall notify EPA in writing at least  
12 sixty (60) days prior to the destruction of any such records or  
13 documents or of its intent to destroy such records or documents  
14 after the five (5) year period specified in this paragraph.

15 17.3. Within ten (10) days after a request by EPA, each  
16 Company shall submit to EPA copies of any draft and final plans,  
17 draft and final task memoranda, including memoranda recording  
18 field modifications, recommendations for further action, quality  
19 assurance memoranda and audits, drafts and final reports, raw  
20 data, field notes, laboratory analytical reports, and any other  
21 documents related to activities planned or undertaken by the  
22 Company which relate to this Consent Order. At the time of any  
23 such EPA request, the Companies may withhold documents only by  
24 asserting, with sufficient justification, that such documents are  
25 legally privileged. Such assertion and justification may be  
26 challenged by EPA in the proper judicial forum.

1 17.4. Each Company may assert a claim of business  
2 confidentiality or other claim for confidentiality for part or  
3 all of the information it submits to EPA pursuant to this Consent  
4 Order. This claim shall be asserted and the information  
5 protected in the manner described in 40 C.F.R. § 2.203(b). If no  
6 such claim accompanies the information when it is submitted to  
7 EPA, it may be made available to the public by EPA without  
8 further notice to the Companies. The Companies shall not assert  
9 any confidentiality claim with respect to any sampling or  
10 monitoring data, except as provided under Sections 13.2 and 13.3  
11 of this Consent Order.

12 **XVIII. DELAY AND FORCE MAJEURE**

13 18.1. "Force Majeure," for purposes of this Consent Order,  
14 is defined as any event arising from causes entirely beyond the  
15 control of the Companies and of any entity controlled by the  
16 Companies, including their contractors and subcontractors, that  
17 delays the timely performance of any obligation under this  
18 Consent order notwithstanding the Companies' best efforts to  
19 avoid the delay. The requirement that the Companies exercise  
20 "best efforts to avoid the delay" includes using best efforts to  
21 anticipate any potential Force Majeure event (a) as it is  
22 occurring, and (b) following the potential Force Majeure event,  
23 such that the delay is minimized to the greatest extent  
24 practicable. Examples of events that are not Force Majeure  
25 events include, but are not limited to, increased costs or  
26 expenses of any work to be performed under this Consent Order,  
27 financial difficulty, normal climatic or precipitation events, or  
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1 failure of a contractor or subcontractor to perform the  
2 obligations under this Consent Order.

3 18.2. If any event occurs which causes delay in the  
4 achievement of any of the requirements of this Consent Order, the  
5 affected Company shall, no later than twenty-four hours after the  
6 occurrence of such event, notify EPA orally of the occurrence and  
7 delay. Within seven (7) days after such event, the affected  
8 Company shall notify EPA in writing of the nature of the delay,  
9 the anticipated duration and cause of the delay, the measures  
10 taken and to be taken to prevent or minimize the delay, and the  
11 schedule to mitigate the effect of the delay. The Companies  
12 shall exercise best efforts to avoid or minimize any delay and  
13 the adverse effects of any such delay on the activities that are  
14 required under this Consent Order.

15 18.3. If EPA agrees that the delay or anticipated delay is  
16 attributable to Force Majeure, the time for performance of the  
17 obligations under this Consent Order that are directly affected  
18 by the Force Majeure event shall be extended by agreement between  
19 EPA and each affected Company for a period of time not to exceed  
20 the actual duration of the delay caused by Force Majeure event.  
21 An extension of the time for performance of the obligation  
22 directly affected by the Force Majeure event shall not, of  
23 itself, extend the time for performance of any subsequent  
24 obligation.

25 18.4. If EPA does not agree that the delay or anticipated  
26 delay has been or will be caused by a Force Majeure event, or  
27 does not agree on the length of the extension, the issue shall be  
28 ELEMENTAL PHOSPHORUS SLAG ADMINISTRATIVE ORDER ON CONSENT - 21

1 subject to the dispute resolutions procedures set forth in this  
2 Consent Order. In any such proceeding, the affected Company or  
3 Companies shall have the burden of demonstrating by a  
4 preponderance of the evidence that the delay or anticipated delay  
5 has been or will be caused by a Force Majeure event, that the  
6 duration of the delay was or will be warranted under the  
7 circumstances, that the Companies did exercise or are exercising  
8 due diligence by using their best efforts to avoid and mitigate  
9 the effects of the delay, and that the Companies have complied  
10 with the requirements of this section.

#### 11 12 **XIX. DISPUTE RESOLUTION**

13 19.1. Any dispute under this Consent Order may be addressed  
14 through the dispute resolution procedures of this section,  
15 whether or not specifically authorized by the provisions of this  
16 Consent Order.

##### 17 A. For Disputes Between EPA and the Companies

18 19.2. If a dispute arises under this Consent Order, the  
19 affected Company or Companies (hereinafter "Companies" for  
20 purposes of this Paragraph) shall notify EPA's Project  
21 Coordinator in writing by certified mail, return receipt  
22 requested, of the dispute within fourteen (14) days after receipt  
23 of notice from EPA of any deficiency, or that any requirement has  
24 not been met. The Companies' written notice shall define the  
25 dispute, and state the basis of the Companies' position. EPA and  
26 the Companies then shall have fourteen (14) days from EPA receipt  
27 of the Companies' notice to attempt in good faith to resolve the

1 dispute. If agreement is reached, the resolution shall be set  
2 forth in a written statement, signed by the Parties, and  
3 incorporated into this Consent Order. If agreement is not  
4 reached within this fourteen (14) day period, the EPA Region 10  
5 Director of the Office of Environmental Cleanup shall provide a  
6 written statement of his or her decision to the Companies which  
7 shall be incorporated into this Consent Order. For those matters  
8 which involve technical or scientific issues, EPA may consult  
9 with the TWG prior to issuing its decision. Within seven (7)  
10 days after receipt of EPA's written decision, the Companies shall  
11 advise EPA in writing whether they will implement EPA's decision.  
12 Failure by the Companies to implement the decision is non-  
13 compliance with this Consent Order, and EPA may elect to  
14 implement the decision, or take any other action it may deem  
15 necessary within its authority.

16 19.3. These dispute resolution procedures shall not provide  
17 a basis for delay of any activities required by this Consent  
18 Order, unless the EPA Project Coordinator agrees in writing to a  
19 schedule extension or alteration.

20 B. For Disputes Between Property Owners/Occupiers and the  
21 Companies

22 19.4. If a dispute arises between a Company and an owner or  
23 occupier (hereinafter in this Subsection, "owner") of property  
24 that is being or has been evaluated in the Exposure Study, the  
25 Company will attempt to resolve the dispute informally. These  
26 informal procedures will include discussions and meetings as  
27 appropriate between the Company and the owner. Upon being



1 notified by an owner that a dispute exists, the Company will  
2 notify the owner that he or she may consult not only with the  
3 Company and its representatives regarding the matter but also  
4 with EPA and the Health Department. The Company similarly will  
5 have the option of consulting with EPA and the Health Department.

6 19.5. The following procedures will apply in the event the  
7 Company and owner are unable to resolve a dispute informally  
8 within sixty (60) days after the date the Company receives notice  
9 of the dispute. For disputes regarding the Exposure Study at the  
10 owner's property, the Company will perform another exposure  
11 evaluation at the owner's request. Any additional retests that  
12 the owner may request will be performed at the option of the  
13 Company. For disputes regarding the appropriate application of  
14 the GDGs at the owner's property, either party may request after  
15 completion of the risk reduction evaluation that the matter be  
16 resolved through binding arbitration. Such arbitration may  
17 commence before the expiration of the 60-day period upon the  
18 mutual consent of the owner and the Company. Informal  
19 discussions between the Company and the owner may continue  
20 despite any request for arbitration. The Company will notify EPA  
21 promptly in the event arbitration procedures are initiated.

22 19.6. Any such arbitration shall take place in Soda  
23 Springs, Fort Hall or Pocatello, Idaho, whichever is the location  
24 of or nearest to the property at issue. The arbitrator shall be  
25 a neutral third party experienced as an arbitrator, former judge  
26 or similar decision-maker who is knowledgeable on environmental  
27 matters and who never has served as an employee of, or contractor

1 or consultant to, the Company or the owner. The Companies will  
2 develop a list of at least five potential arbitrators, which also  
3 sets forth the qualifications and employment history of each  
4 candidate arbitrator, and provide this list to EPA for review  
5 within sixty (60) days after the effective date of this Consent  
6 Order. The Companies will remove candidate arbitrators from this  
7 list upon the request of EPA. The Companies then shall revise  
8 the list to include substitute arbitrators and provide the  
9 revised list to EPA for its review. Owners will be given this  
10 list and the complete information supplied to EPA on the  
11 candidate arbitrators' qualifications to assist them in selecting  
12 an arbitrator.

13 19.7. In the event the owner cannot agree to an arbitrator  
14 from the above-described list, the owner shall provide the  
15 Company and EPA with a list of other qualified neutral persons  
16 whom the owner would accept as arbitrators, including information  
17 on their qualifications and employment history. If the Company  
18 cannot agree to an arbitrator from this list, the Company and the  
19 owner will request the American Arbitration Association (AAA) to  
20 provide them with a list of at least five (5) neutral and  
21 qualified persons who could serve as arbitrators. The Company  
22 and the owner will attempt in good faith to agree on an  
23 arbitrator from the AAA list: if they cannot reach such an  
24 agreement, the AAA shall have the power to appoint an arbitrator  
25 from the list it submitted. The Company shall pay any costs  
26 associated with having AAA prepare a list of candidate  
27 arbitrators or selecting an arbitrator from this list.

1 19.8. In the arbitration proceeding the parties may offer  
2 such facts and information that are relevant to the dispute, and  
3 shall produce such evidence as the arbitrator may deem necessary  
4 to an understanding and determination of the dispute. The  
5 arbitrator shall consider the facts and information presented by  
6 the Company and the owner and in this Consent Order and issue a  
7 decision regarding the appropriate risk reduction action at the  
8 property. The Company will pay all of the arbitrator's fees and  
9 expenses, all of the costs associated with the facilities that  
10 are used for the arbitration, and all of the costs associated  
11 with creating a record of the arbitration proceeding. The  
12 arbitrator will issue his or her decision in writing. The  
13 arbitrator's decision, as may be modified as a result of the  
14 reconsideration procedure described in Paragraph 19.9 below, will  
15 be final and binding on the Company and the owner.

16 19.9. Within thirty (30) days after the date of the  
17 arbitrator's decision, the owner or the Company may request that  
18 EPA review the decision. EPA then will review the information  
19 that the owner and the Company submitted for the arbitrator's  
20 consideration, and any other relevant information that EPA may  
21 deem appropriate. If EPA determines that not all the relevant  
22 facts and information were presented at the arbitration, then EPA  
23 will so inform the owner and the Company within ninety (90) days  
24 of receiving the request for review. Within thirty (30) days  
25 after being informed of any such EPA determination, the owner or  
26 the Company may request that the arbitration proceeding be re-  
27 opened to consider the results of the EPA review. EPA shall have

1 the option of presenting the results of its review directly in  
2 the re-opened arbitration proceeding. The arbitrator thereafter  
3 will issue a written decision that either confirms or revises his  
4 or her original decision in the matter.

5 **XX. STIPULATED PENALTIES**

6 20.1. For each day that a Company fails to timely produce a  
7 document listed in Paragraph 20.2 below that is of acceptable  
8 quality, or otherwise fails to perform in accordance with the  
9 requirements of this Consent Order, such Company shall pay  
10 stipulated penalties. Penalties shall begin to accrue on the day  
11 that performance is due or a violation occurs, and shall extend  
12 until such time as acceptable performance occurs. Any stipulated  
13 penalties for failure to meet requirements for carrying out the  
14 Exposure Study Work Plan or the Graded Decision Guidelines  
15 Implementation Work Plan or to make required reports pertaining  
16 to the areas for which The Monsanto Company has responsibility  
17 under Paragraph 9.9 shall be the separate responsibility of The  
18 Monsanto Company; any stipulated penalties for failure to carry  
19 out these requirements with respect to the areas for which FMC  
20 Corporation has responsibility under Paragraph 9.9 shall be  
21 separate responsibility of FMC Corporation.

22 20.2. Stipulated penalties shall accrue in the following  
23 amounts for each day of non-compliance as follows:

24 For failure to submit the interim or periodic reports as required  
25 pursuant to Paragraphs 9.6 and 9.7

26 Period of Failure	Penalty Per Violation Per Day
27 first seven (7) days	\$200 per day

days eight (8) - fifteen (15) \$500 per day  
days sixteen (16) - thirty (30) \$2,000 per day  
days thirty-one (31) - ninety (90) \$5,000 per day

For failure to submit the reports, memoranda and other documents that may be required pursuant to the Exposure Study Work Plan or the GDG Implementation Plan, and failure to meet any other Consent Order requirements

Period of Failure	Penalty Per Violation Per Day
first seven (7) days	\$250 per day
days eight (8) - fifteen (15)	\$1,000 per day
days sixteen (16) - thirty (30)	\$3,000 per day
days thirty-one (31) - ninety (90)	\$7,500 per day

20.3. The Companies shall make all payments by forwarding a check payable to the "Hazardous Substance Superfund" to:

Mellon Bank  
U.S. EPA Region 10  
ATTN: Superfund Accounting  
P.O. Box 360903M  
Pittsburgh, Pennsylvania 15251

Checks shall also state "Southeast Idaho Slag," the EPA Identification number 10-J1, and the EPA docket number of this Consent Order. A copy of the check and transmittal letters shall be sent to the EPA Project Coordinator.

20.4. Payment shall be due within thirty (30) days after receipt of a demand letter from EPA. The affected Company or Companies shall pay interest on any unpaid balance, which shall begin to accrue at the end of the thirty (30) day period, at the rate established by the U.S. Department of Treasury.



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1        21.3. For all payments under this section, the Companies  
2 shall remit checks, made payable to the "Hazardous Substance  
3 Superfund" to the following address or such other address as EPA  
4 may designate, in writing:

5                    Mellon Bank  
6                    U.S. EPA Region 10  
7                    ATTN: Superfund Accounting  
8                    P.O. Box 360903M  
9                    Pittsburgh, Pennsylvania 15251

10 Checks shall also state "Southeast Idaho Slag," the EPA  
11 Identification number 10-J1, and the EPA docket number of this  
12 Consent Order. A copy of the check and transmittal letters shall  
13 be sent to the EPA Project Coordinator.

14        21.4. Payment shall be due within thirty (30) days after  
15 receipt of the bill from EPA. The Companies shall pay interest  
16 on any unpaid balance, which shall begin to accrue on the date of  
17 receipt of the bill, at the rate of interest on investments for  
18 the Hazardous Substances Superfund in Section 107(a) of CERCLA,  
19 42 U.S.C. § 9607(a).

20        21.5. Disputes concerning costs for which reimbursement is  
21 sought after the effective date of this Consent Order shall be  
22 limited to accounting errors and the inclusion of costs outside  
23 the scope of this Consent Order, or which are other than "not  
24 inconsistent with the NCP." The Companies shall identify any  
25 contested costs and the basis of their objection in writing. All  
26 undisputed costs shall be remitted by the Companies in accordance  
27 with the schedule set forth above. Disputed costs shall be paid,  
28 if required, ten (10) days after resolution of the dispute. The  
29 Companies shall have the burden of proving by a preponderance of

1 the evidence any EPA accounting error, or the inclusion of any  
2 cost outside the scope of this Consent Order or inconsistent with  
3 the NCP. Interest shall accrue during any cost dispute.

#### 4 **XXII. RESERVATIONS OF RIGHTS**

5 22.1. The payment of stipulated penalties and costs as may  
6 be required by this Consent Order shall not preclude EPA from  
7 pursuing any other remedies or sanctions which may be available  
8 by reason of failure on the part of either or both Companies to  
9 comply with any portion of this Consent Order.

10 22.2. Except as expressly provided in this Consent Order,  
11 each Party reserves all rights and defenses it may have. Nothing  
12 in this Consent Order will affect EPA's removal authority or  
13 EPA's response or enforcement authorities, including but not  
14 limited to the right to seek injunctive relief, stipulated  
15 penalties, statutory penalties, and/or punitive damages, nor  
16 preclude the United States from taking action to enforce this  
17 Consent Order, nor from taking any action pursuant to CERCLA or  
18 any other applicable authority.

#### 19 **XXIII. OTHER CLAIMS**

20 23.1. By entering into this Consent Order, the Companies  
21 waive the right to seek reimbursement under Section 106(b) of  
22 CERCLA, 42 U.S.C. § 9606(b), or to present a claim under  
23 Sections 111 or 112 of CERCLA, 42 U.S.C. §§ 9611 or 9612, for the  
24 costs of implementing this Consent Order. This Consent Order  
25 does not constitute any decision on preauthorization of funds  
26 under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

27 However, the Companies expressly reserve any and all claims they

1 may have against any Department, Agency or organizational unit of  
2 the United States or other entity or person other than EPA. Such  
3 claims may include, but are not limited to, contribution and  
4 counterclaims relating to or arising out of matters covered by or  
5 referenced in this Consent Order.

#### 6 **XXIV. INDEMNIFICATION**

7 24.1. The United States including its agencies, officers,  
8 employees, and agents, shall not be liable for any injuries or  
9 damages to persons or property resulting from acts or omissions  
10 by the Companies, their officers, employees, receivers, trustees,  
11 agents, or contractors in carrying out any activities pursuant to  
12 this Consent Order; nor shall the United States be deemed a party  
13 to any contract made by either Company, or their agents in  
14 carrying out any activities pursuant to this Consent Order. Each  
15 Company shall save and hold harmless the United States, its  
16 agencies, officers, employees, and agents from, and shall  
17 indemnify the United States against and for, any and all claims  
18 or causes of action arising from or on account of such Company's  
19 acts or omissions its agents or representatives, relating in any  
20 way to any activities pursuant to this Consent Order except to  
21 the extent such claims or causes of action relate to negligence,  
22 gross negligence or willful misconduct on the part of EPA or its  
23 contractors.

#### 24 **XXV. JUDICIAL REVIEW**

25 25.1. The Companies shall not seek judicial review of this  
26 Consent Order in any action except an action by the United States  
27 to: 1) enforce this Consent Order; 2) recover costs incurred in  
28 ELEMENTAL PHOSPHORUS SLAG ADMINISTRATIVE ORDER ON CONSENT - 32

1 connection with this Consent Order; or 3) compel action relating  
2 to the slag addressed by this Consent Order. Judicial review of  
3 this Consent Order shall be limited to the administrative record.  
4 Otherwise applicable principles of administrative law shall  
5 govern whether any supplemental materials may be considered by  
6 the court. In considering objections raised in any judicial  
7 review, EPA's decisions shall be upheld unless the court finds  
8 they were arbitrary and capricious or otherwise not in accordance  
9 with law. Nothing in this paragraph shall limit any action by  
10 the Companies against any party, including any departments,  
11 agencies or subdivisions of the United States other than EPA, to  
12 recover costs incurred in implementing this Consent Order, or for  
13 damages or contribution pursuant to Section 107 of CERCLA, 42  
14 U.S.C. § 9607, or other applicable law; or any action pursuant to  
15 Section 310 of CERCLA, 42 U.S.C. § 9659, or Section 7002 of RCRA,  
16 42 U.S.C. § 6972.

#### 17 **XXVI. COMMUNITY RELATIONS**

18 26.1. Community relations activities relevant to the  
19 implementation of this Order are the primary responsibility of  
20 EPA and its representatives. The Companies shall provide  
21 appropriate assistance upon EPA request. Whenever possible, the  
22 Parties agree to cooperate in the conduct of community relations  
23 activities.

24 26.2. The parties recognize the considerable public  
25 interest in matters covered by this Consent Order, and the value  
26 of broad community involvement in the process, particularly with  
27 respect to intrusive or potentially disruptive activities such as  
28 ELEMENTAL PHOSPHORUS SLAG ADMINISTRATIVE ORDER ON CONSENT - 33



1 home testing. The Parties agree to cooperate in keeping the  
2 affected communities informed of the progress in the  
3 implementation of this Consent Order, and to facilitate community  
4 participation in planning and decision-making to the maximum  
5 extent practicable, including, but not limited to, implementation  
6 of EPA-approved Work Plans, Graded Decision Guidelines, and other  
7 EPA-approved technical interim work products.

8 **XXVII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION**

9 27.1. The effective date of this Consent Order shall be the  
10 date it is issued by EPA.

11 27.2. This Consent Order may be amended by mutual agreement  
12 of EPA and the Companies. Amendments shall be in writing and  
13 shall be effective when executed by EPA.

14 **XXVIII. COMPLETION**

15 28.1. The requirements of this Consent Order shall be  
16 completed when the Companies demonstrate in writing and certify  
17 to EPA satisfaction that all requirements of this Consent Order  
18 have been satisfied, and EPA has approved the certification in  
19 writing. The Companies may request EPA approval of their  
20 certification of completion at any time following the submission  
21 of certified documentation. Each Company may request separate  
22 certification of completion with respect to the exposure studies  
23 and GDG implementation for which it is responsible under this  
24 Consent Order.

1 XXIX. SIGNATORIES

2 29.1. The undersigned representatives certify that they are  
3 fully authorized to enter into this Consent Order and to execute  
4 and legally bind their respective principal hereto.

5 For the Monsanto Company:

6  
7 By: Bruce E. Gallante

Date: June 4, 1996

8 Title: Plant Manager

9  
10 Initialed by William D. Lambert  
MBJ Law

11 For FMC Corporation:

12  
13  
14 By: \_\_\_\_\_

Date: \_\_\_\_\_

15 Title: \_\_\_\_\_

1 XXIX. SIGNATORIES

2 29.1. The undersigned representatives certify that they are  
3 fully authorized to enter into this Consent Order and to execute  
4 and legally bind their respective principal hereto.

5 For the Monsanto Company:

6  
7 By: \_\_\_\_\_

Date: \_\_\_\_\_

8 Title: \_\_\_\_\_  
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11 For FMC Corporation:

12  
13 By: Paul R. Johnson

Date: June 3, 1996

14 Title: Plant Manager  
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1 IT IS SO ORDERED:

2 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION 10  
3

4 By:

Catherine C. Krueger

Date: 6/6/96

5 Title:

Unit Manager, ECL